LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Previously Presented)

A synchronous rectifier comprising:

a MOSFET device; and

a gate driver for driving the MOSFET device, the MOSFET device comprising first and second MOSFET transistors coupled with their drain-source paths in parallel to receive an alternating current waveform for rectification by the drain- source paths of the MOSFET transistors, the gate driver being connected to the respective gates of the first and second MOSFET transistors, the first transistor having a low Rdson and the second transistor having a high Rdson whereby the apparent Rdson of the MOSFET device is increased when the current through the MOSFET device is below a threshold thereby enabling zero crossing detection.

Claim 2 (Previously Presented)

The synchronous rectifier of claim 1, wherein the gate driver comprises a Schmidt trigger having an output coupled to one of the gates of the MOSFET device and having its inputs coupled across the drain-source path of the corresponding MOSFET.

Claim 3 (Previously Presented)

The synchronous rectifier of claim 2, wherein the gate driver comprises two Schmidt triggers, one connected to the gate of the first transistor having a low Rdson and a second connected to the gate of the second transistor having a high Rdson.

Claim 4 (Previously Presented)

The synchronous rectifier of claim 3, wherein each said Schmidt trigger has its inputs coupled across the drain-source voltage of the corresponding MOSFET device.

Claims 5-6 (Canceled)

Claim 7 (Previously Presented)

A method of driving a MOSFET device as a synchronous rectifier comprising:

increasing the apparent drain to source on-resistance (Rdson) of the MOSFET device when the current flowing in the drain-source path of the MOSFET device is below a threshold level, thereby enabling zero crossing detection; and

further comprising providing, as said MOSFET device, two MOSFETs with their drain-source paths in parallel, one MOSFET having a high Rdson and the second having a low Rdson.

Claim 8 (Previously Presented)

The method of claim 7, further comprising sensing the voltage across the drain-source path of the MOSFET device and switching on the MOSFET with the high Rdson first and as the current increases above an on-threshold level, switching on the MOSFET with the low Rdson.

Claim 9 (Original)

The method of claim 8, further comprising switching the MOSFET with low Rdson off as the current decreases below an off-threshold level and thereafter switching the MOSFET with high Rdson off as the current further decreases.

Claim 10 (Original)

The method of claim 9, wherein the on-threshold and off-threshold levels are different.

Claim 11 (Canceled)

Claim 12 (Previously Presented)

A method for driving power MOSFETs as a synchronous rectifier comprising the steps of:

coupling first and second MOSFETs with their drain-source paths in parallel to receive an alternating current waveform for rectification by the drain-source paths, the first MOSFET having a low Rdson and the second MOSFET having a high Rdson whereby the apparent Rdson of the two MOSFETs in parallel is increased when the current through the MOSFETs is below a threshold thereby enabling zero crossing detection.

Claim 13 (Previously Presented)

The method of claim 12 further comprising the step of coupling the inputs of a Schmidt trigger across the drain-source path and the output to the gate of one said MOSFET and sensing the drain-source voltage across the MOSFET to determine when to switch the first and second MOSFETs on and off.

Claim 14 (Previously Presented)

The method of claim 12, further comprising the step of providing two Schmidt triggers, one having an output connected to the gate of the first MOSFET having a low Rdson and a second having an output connected to the gate of the second MOSFET having a high Rdson.

Claims 15-23 (Canceled)

Claim 24 (Previously Presented)

The synchronous rectifier of claim 2, wherein said Schmidt trigger has a negative input connected to the drain of the MOSFET and a positive input connected to the source of the MOSFET.

Claim 25 (Previously Presented)

The synchronous rectifier of claim 4, wherein each said Schmidt trigger has a negative input connected to the drain of the corresponding MOSFET and a positive input connected to the source of the corresponding MOSFET.

Claim 26 (Previously Presented)

The method of claim 13, wherein said Schmidt trigger has a negative input connected to the drain of the MOSFET and a positive input connected to the source of the MOSFET.

Claim 27 (Previously Presented)

The method of claim 14, wherein the inputs of each Schmidt trigger are coupled across the drain-source path of the corresponding MOSFET.

Claim 28 (Previously Presented)

The method of claim 27, wherein each Schmidt trigger has a negative input connected to the drain of the MOSFET and a positive input connected to the source of the MOSFET.

Claims 29-30 (Canceled)